The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number:	08/958,570
Source:	
Date Processed by STIC:	

# ENTERED



IFW16

#### RAW SEQUENCE LISTING

DATE: 12/21/2004 TIME: 10:39:06

PATENT APPLICATION: US/08/958,570B

Input Set: N:\Crf3\RULE60\08958570b.raw.txt
Output Set: N:\CRF4\12212004\H958570B.raw

#### SEQUENCE LISTING

1 (1) GENERAL INFORMATION:

```
(i) APPLICANT: Gregory, Richard J.
      2
      3
                             Wills, Ken N.
      4
                             Maneval, Daniel C.
      5
             (ii) TITLE OF INVENTION: Recombinant Adenoviral Vector and
      6
                                      Methods of Use
            (iii) NUMBER OF SEQUENCES: 9
      7
      8
             (iv) CORRESPONDENCE ADDRESS:
                   (A) ADDRESSEE: Townsend and Townsend and Crew LLP
      9
     10
                   (B) STREET: Two Embarcadero Center, Eighth Floor
     11
                   (C) CITY: San Francisco
     12
                   (D) STATE: California
     13
                   (E) COUNTRY: USA
                   (F) ZIP: 94111-3834
     14
     15
             (v) COMPUTER READABLE FORM:
                   (A) MEDIUM TYPE: Floppy disk
     16
     17
                   (B) COMPUTER: IBM PC compatible
     18
                   (C) OPERATING SYSTEM: PC-DOS/MS-DOS
                   (D) SOFTWARE: PatentIn Release #1.0, Version #1.30
     19
     20
            (vi) CURRENT APPLICATION DATA:
C--> 21
                   (A) APPLICATION NUMBER: US/08/958,570B
C--> 22
                   (B) FILING DATE: 28-Oct-1997
     23
                   (C) CLASSIFICATION:
     24
           (vii) PRIOR APPLICATION DATA:
W--> 25
                   (A) APPLICATION NUMBER: US/08/328,673
     26
                   (B) FILING DATE: 25-Oct-1994
W--> 27
                   (A) APPLICATION NUMBER: US 08/142,669
     28
                   (B) FILING DATE: 25-OCT-1993
W--> 29
                   (A) APPLICATION NUMBER: US 08/233,669
     30
                   (B) FILING DATE: 26-APR-1994
          (viii) ATTORNEY/AGENT INFORMATION:
     31
                   (A) NAME: Smith, Timothy S.
     32
     33
                   (B) REGISTRATION NUMBER: 35,367
                   (C) REFERENCE/DOCKET NUMBER: 016930-000920US
     34
     35
            (ix) TELECOMMUNICATION INFORMATION:
     36
                  (A) TELEPHONE: (415) 576-0200
                  (B) TELEFAX: (415) 576-0300
     37
        (2) INFORMATION FOR SEQ ID NO: 1:
     38
    39
             (i) SEQUENCE CHARACTERISTICS:
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                  (A) LENGTH: 25 base pairs
     41
                  (B) TYPE: nucleic acid
     42
                  (C) STRANDEDNESS: single
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DATE: 12/21/2004 PATENT APPLICATION: US/08/958,570B TIME: 10:39:06

Input Set : N:\Crf3\RULE60\08958570b.raw.txt Output Set: N:\CRF4\12212004\H958570B.raw

	43		(D) TOPOLOGY: linear	
W>	44		(ii) MOLECULE TYPE: DNA	
	45		(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 1:	
	46		CGCCACCGAG GGACCTGAGC GAGTC	25
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	50		(A) LENGTH: 20 base pairs	
	51		(B) TYPE: nucleic acid	
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	53		(D) TOPOLOGY: linear	
W>	54		(ii) MOLECULE TYPE: DNA	
	55		(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 2:	
	56		TTCTGGGAAG GGACAGAAGA	20
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	63		(D) TOPOLOGY: linear	
M>			(ii) MOLECULE TYPE: DNA	
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	66		CGCGCTAGCT CTGCCCCAAA GAGCT	25
	68	(2)	INFORMATION FOR SEQ ID NO: 4:	
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	70		(A) LENGTH: 39 base pairs	
	71 72		(B) TYPE: nucleic acid	
	73		(C) STRANDEDNESS: single	
₩>			(D) TOPOLOGY: linear	
M>	7 <b>5</b>		(ii) MOLECULE TYPE: DNA (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4:	
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	78	(2)	INFORMATION FOR SEQ ID NO: 5:	39
	79	(2)	(i) SEQUENCE CHARACTERISTICS:	
	80		(A) LENGTH: 35 base pairs	
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	82		(C) STRANDEDNESS: single	
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W>	84		(ii) MOLECULE TYPE: DNA	
	85		(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 5:	
	86		CGTGCGGCCG CTGGAGGACT TTGAGGATGT CTGTC	35
	88	(2)	INFORMATION FOR SEQ ID NO: 6:	
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	92		(C) STRANDEDNESS: single	
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	95		(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 6:	
	96		CGCTCTAGAG AGACCAGTTA GGAAGTTTTC GCA	33

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Input Set : N:\Crf3\RULE60\08958570b.raw.txt Output Set: N:\CRF4\12212004\H958570B.raw

98 (2) INFORMATION FOR SEQ ID NO: 7: 99 (i) SEQUENCE CHARACTERISTICS:														
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(A) DENGIH: 2995 base pairs (B) TYPE: nucleic acid														
(C) STRANDEDNESS: single														
03 (D) TOPOLOGY: linear														
104 (ii) MOLECULE TYPE: cDNA														
105 (ix) FEATURE:														
106 (A) NAME/KEY: CDS														
107 (B) LOCATION: 1392925														
108 (D) OTHER INFORMATION: /product= "RB"														
109 /note= "retinoblastoma tumor suppressor"														
110 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 7:														
~ ~ ~ ~ ~	<b>3</b> 60													
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113 CCGCCGCGGA AAGGCGTC ATG CCG CCC AAA ACC CCC CGA AAA ACG GCC GCC	120 171													
114 Met Pro Pro Lys Thr Pro Arg Lys Thr Ala Ala	1/1													
115 1 5 10														
116 ACC GCC GCC GCC GCC GCG GAA CCC CCG GCA CCG CCG	219													
117 Thr Ala Ala Ala Ala Ala Glu Pro Pro Ala Pro Pro Pro Pro	219													
118 15 20 25														
119 CCT CCT GAG GAG GAC CCA GAG CAG GAC AGC GGC CCG GAG GA	267													
120 Pro Pro Glu Glu Asp Pro Glu Gln Asp Ser Gly Pro Glu Asp Leu Pro	207													
121 30 35 40														
122 CTC GTC AGG CTT GAG TTT GAA GAA ACA GAA GAA CCT GAT TTT ACT GCA	315													
Leu Val Arg Leu Glu Phe Glu Glu Thr Glu Glu Pro Asp Phe Thr Ala	313													
124 45 50 55														
125 TTA TGT CAG AAA TTA AAG ATA CCA GAT CAT GTC AGA GAG AGA GCT TGG	363													
126 Leu Cys Gln Lys Leu Lys Ile Pro Asp His Val Arg Glu Arg Ala Trp	303													
127 60 65 70 75														
128 TTA ACT TGG GAG AAA GTT TCA TCT GTG GAT GGA GTA TTG GGA GGT TAT	411													
129 Leu Thr Trp Glu Lys Val Ser Ser Val Asp Gly Val Leu Gly Gly Tyr														
130 80 85 90														
ATT CAA AAG AAA AAG GAA CTG TGG GGA ATC TGT ATC TTT ATT GCA GCA	459													
132 Ile Gln Lys Lys Glu Leu Trp Gly Ile Cys Ile Phe Ile Ala Ala														
133 95 100 105														
134 GTT GAC CTA GAT GAG ATG TCG TTC ACT TTT ACT GAG CTA CAG AAA AAC	507													
Val Asp Leu Asp Glu Met Ser Phe Thr Phe Thr Glu Leu Gln Lys Asn														
136 110 115 120														
ATA GAA ATC AGT GTC CAT AAA TTC TTT AAC TTA CTA AAA GAA ATT GAT	555													
138 Ile Glu Ile Ser Val His Lys Phe Phe Asn Leu Leu Lys Glu Ile Asp														
139 125 130 135														
ACC AGT ACC AAA GTT GAT AAT GCT ATG TCA AGA CTG TTG AAG AAG TAT	603													
141 Thr Ser Thr Lys Val Asp Asn Ala Met Ser Arg Leu Leu Lys Lys Tyr														
142 140 145 150 155														
142 140 145 150 155 143 GAT GTA TTG TTT GCA CTC TTC AGC AAA TTG GAA AGG ACA TGT GAA CTT	651													
	651													
GAT GTA TTG TTT GCA CTC TTC AGC AAA TTG GAA AGG ACA TGT GAA CTT	651													

DATE: 12/21/2004 PATENT APPLICATION: US/08/958,570B TIME: 10:39:06

Input Set : N:\Crf3\RULE60\08958570b.raw.txt Output Set: N:\CRF4\12212004\H958570B.raw

147	Ile	Tyr	Leu		Gln	Pro	Ser	Ser		Ile	Ser	Thr	Glu		Asn	Ser	
148				175		~			180	- ~-				185			
149												TTA					747
150	Ala	ьeu		Leu	ьуѕ	vaı	ser	_	шe	Thr	Pne	Leu		Ala	ьys	GIA	
151	~~ n	~mx	190	(13.3	3.00	~~~	C 3 m	195	ama.	ama		ma*	200	~~~		3 ma	505
152												TCA					795
153	GIU		ьeu	GIN	мес	GIU	-	Asp	Leu	vaı	ше	Ser	Pne	GIN	ьeu	met	
154 155	Cura	205	CITIC!	Cmm	CAC	m v m	210	א חווח	7 7 7	CTTC	max.	215	caa	7 III CI	mma	OTT C	0.43
156												CCT					843
157	220	Cys	vai	пеп	Asp	225	Pile	TTE	цуѕ	пеп	230	Pro	PIO	Met	ьeu	235	
158		GDD	$CC\Delta$	ייעיי	2 2 2		CCT	ርሞጥ	מיימ	CCC		AAT	CCT	TCA	ССТ		891
159												Asn					091
160	27.5	Olu	110	- 7 -	240	1111	111 u	vul	110	245	110	ASII	Ory	DCI	250	Arg	
161	ACA	CCC	AGG	CGA		CAG	AAC	AGG	AGT		CGG	ATA	GCA	ααα		СТА	939
162												Ile					303
163			5	255	1			5	260		5			265			
164	GAA	AAT	GAT		AGA	ATT	ATT	GAA		CTC	TGT	AAA	GAA		GAA	TGT	987
165												Lys					
166			270					275			-	-	280			2	
167	AAT	ATA	GAT	GAG	GTG	AAA	AAT	GTT	TAT	TTC	AAA	AAT	TTT	ATA	CCT	TTT	1035
168	Asn	Ile	Asp	Glu	Val	Lys	Asn	Val	Tyr	Phe	Lys	Asn	Phe	Ile	Pro	Phe	
169		285	-				290		_		_	295					
170	ATG	AAT	TCT	CTT	GGA	CTT	GTA	ACA	TCT	AAT	GGA	CTT	CCA	GAG	GTT	GAA	1083
171	Met	Asn	Ser	Leu	Gly	Leu	Val	Thr	Ser	Asn	Gly	Leu	Pro	Glu	Val	Glu	
172	300					305					310					315	
173	AAT	CTT	TCT	AAA	CGA	TAC	GAA	GAA	ATT	TAT	CTT	AAA	AAT	AAA	GAT	CTA	1131
174	Asn	Leu	Ser	Lys	Arg	Tyr	Glu	Glu	Ile	Tyr	Leu	Lys	Asn	Lys	Asp	Leu	
175					320					325					330		
176	GAT	GCA	AGA	TTA	TTT	TTG	GAT	CAT	GAT	AAA	ACT	CTT	CAG	ACT	GAT	TCT	1179
177	Asp	Ala	Arg		Phe	Leu	Asp	His	Asp	Lys	Thr	Leu	Gln	Thr	Asp	Ser	
178				335					340				-	345			
179												AAA -					1227
180	He	Asp		Phe	Glu	Thr	GIn	_	Thr	Pro	Arg	Lys		Asn	Leu	Asp	
181	<b>CD B</b>	a	350	7 7 C	CITE A	3 mm	cmm.	355	<b>C T C</b>	1 CT	CC.	amm	360	7 Cm	amm	3 mg	1085
182												GTT					1275
183	GIU		vaı	Asn	vai	тте		Pro	HIS	Thr	Pro	Val	Arg	Thr	Vai	мет	
184	770	365	<b>አ</b> ጥር	C7 7 7	C 7 7	מיחים	370	א יייט	א נדינדי	תיתי א	7/ 7/ TT	375 TCA	CCA	7 C'III	C A TI	CD D	1202
185	_					_				_	_	_					1323
186 187	380	1111	TIE	GIII	GIII	385	Met	Met	116	пеи	390	Ser	нта	ser	Asp	395	
188		מירי א	CAA	ייית ת	CTC		TOC	יוזי עניזי	יחיחים	አአሮ		TGC	7 (7	CTC	ייי א א		1371
189												Cys					13/1
190	110	ber	Olu	non	400	110	DCI	ı yı	1110	405	71511	Cys	1111	vai	410	110	
191	ΔΔΔ	GAA	AGT	ΔΤΔ		מממ	AGA	GTG	AAG		ልጥል	GGA	ТАС	ΔΤС		ααα	1419
192				_								Gly					1117
193	-15			415	<b>-</b>	טעב	*** 9	141	420		~~0	~ <u> </u>	-1-	425	1110	~ <sub>I</sub> 5	
194	GAG	AAA	TTT		AAA	GCT	GTG	GGA		GGT	TGT	GTC	GAA		GGA	TCA	1467
195												Val					
					-1 ~			1		1	- 4				1		

DATE: 12/21/2004 TIME: 10:39:06

Input Set : N:\Crf3\RULE60\08958570b.raw.txt

Output Set: N:\CRF4\12212004\H958570B.raw

PATENT APPLICATION: US/08/958,570B

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197	CAG	CGA		AAA	CTT	GGA	GTT		TTG	TAT	TAC	CGA		ATG	GAA	TCC	1515
198					Leu												1313
199		445	- 4			<u>1</u>	450	9		-1-	-1-	455			014	561	
200	ATG	CTT	AAA	TCA	GAA	GAA		CGA	TTA	TCC	ATT		ААТ	ттт	AGC	AAA	1563
201					Glu												
202	460		-			465		5			470					475	
203	CTT	CTG	AAT	GAC	AAC		TTT	CAT	ATG	TCT		TTG	GCG	TGC	GCT		1611
204					Asn												
205				_	480					485				<b>1</b>	490		
206	GAG	GTT	GTA	ATG	GCC	ACA	TAT	AGC	AGA	AGT	ACA	TCT	CAG	AAT	CTT	GAT	1659
207	_				Ala												
208				495			_		500					505		•	
209	TCT	GGA	ACA	GAT	TTG	TCT	TTC	CCA	TGG	ATT	CTG	AAT	GTG	CTT	AAT	TTA	1707
210	Ser	Gly	Thr	Asp	Leu	Ser	Phe	Pro	Trp	Ile	Leu	Asn	Val	Leu	Asn	Leu	
211			510					515					520				
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213	Lys	Ala	Phe	Asp	Phe	Tyr	Lys	Val	Ile	Glu	Ser	Phe	Ile	Lys	Ala	Glu	
214		525					530					535					
215	GGC	AAC	TTG	ACA	AGA	GAA	ATG	ATA	AAA	CAT	TTA	GAA	CGA	TGT	GAA	CAT	1803
216	Gly	Asn	Leu	Thr	Arg	Glu	Met	Ile	Lys	His	Leu	Glu	Arg	Cys	Glu	His	
217	540					545					550					555	
218					TCC												1851
219	Arg	Ile	Met	Glu	Ser	Leu	Ala	$\operatorname{Trp}$	Leu	Ser	Asp	Ser	Pro	Leu	Phe	Asp	
220					560					565					570		
221					TCA												1899
222	Leu	Ile	Lys		Ser	Lys	Asp	Arg	Glu	Gly	Pro	Thr	Asp	His	Leu	Glu	
223				575					580					585			
224		_			CTT												1947
225	Ser	Ala	-	Pro	Leu	Asn	Leu		Leu	Gln	Asn	Asn		Thr	Ala	Ala	
226	~		590					595					600				
227					TCT												1995
228	Asp		Tyr	Leu	Ser	Pro		Arg	ser	Pro	Lys	_	Lys	GIY	Ser	Thr	
229	T CC	605	ama	70 70 FT	m am	7. C/ITI	610	7 7 C	G G 3	~~~	3.03	615	~~~		max	~~~	0010
230					TCT												2043
231		Arg	vai	ASII	Ser		Ата	ASII	Ala	GIU		GIN	Ala	Tnr	ser		
232 233	620	CAC	700	aha	2 2 2	625	mma.	7. 7. 7.	mam.	7 00	630	CITIES .	max.	ama	mmm	635	2001
					AAG												2091
234 235	Pile	GIII	1111	GIII	Lys	PIO	ьец	гуѕ	ser		ser	ьeu	Ser	ьeu		Tyr	
236	מממ	7 7 7	CTC	ייי אייי	640 CGG	CITIA	ccc	יייעייי	CTC	645	CTIA	יוי א א	ת כי	Curur	650	CD D	2120
237					Arg												2139
238	цуз	шуз	vai	655	Arg	пец	Ата	TYL	660	Arg	цец	ASII	1111	665	Cys	GIU	
239	CGC	سس	CTG		GAG	CAC	CCA	CDD		GAA	Сип	አጥC	አጥC		አርር	टमम	2197
240					Glu												2187
241	9	<b>1</b> 0 u	670	JC1	Jiu	*****	110	675	a.cu	υ±u	1112	110	680	ıτÞ	111T	пси	
242	TTC	CAG		ACC	CTG	CAG	דעע		тдт	GAA	СТС	ΔТС		GAC	ACC	СУТ	2235
243					Leu												رريي
244		685					690	J. u	-1-	Jau	<b>2</b> 04	695	9	-10P	9	1110	
		555					220										

#### VERIFICATION SUMMARY

DATE: 12/21/2004 PATENT APPLICATION: US/08/958,570B TIME: 10:39:07

Input Set : N:\Crf3\RULE60\08958570b.raw.txt Output Set: N:\CRF4\12212004\H958570B.raw

L:21 M:220 C: Keyword misspelled or invalid format, [(A) APPLICATION NUMBER:] L:22 M:220 C: Keyword misspelled or invalid format, [(B) FILING DATE:] L:27 M:238 W: Alpha Fields not Ordered, Reordered [(A) APPLICATION NUMBER:] of (1) (vii) L:29 M:238 W: Alpha Fields not Ordered, Reordered [(A) APPLICATION NUMBER:] of (1) (vii) L:44 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=1 L:54 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=2 L:64 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=3 L:74 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=4 L:84 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=5 L:94 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=6